



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,253	10/25/2001	George G. Mueller	C01104/70002 RFG	3824

23628 7590 12/03/2003

WOLF GREENFIELD & SACKS, PC
FEDERAL RESERVE PLAZA
600 ATLANTIC AVENUE
BOSTON, MA 02210-2211

EXAMINER

PHILOGENE, HAISSA

ART UNIT	PAPER NUMBER
----------	--------------

2821

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,253

Applicant(s)

MUELLER ET AL.

Examiner

Haissa Philogene

Art Unit

2821

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 24-26, 31-43 and 45-48 is/are allowed.
- 6) ☒ Claim(s) 1-19, 21-23, 27-30 and 44 is/are rejected.
- 7) ☒ Claim(s) 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 July 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 27, 28, 44 and 49-51 are rejected under 35 U.S.C. 102(e) as being anticipated by Eppe, Patent No. 5,680,730.

As per claims 1, 2 and 44, Eppe discloses an apparatus comprising a pool containing a liquid (swimming pool) and at least one light source 26 supported by the pool via at least a base 12 which is connected to a sidewall of the pool (see Col.3, lines 33-35) to illuminate the liquid, said at least one light source 26 capable of being a LED light source (see Col.6, lines 30-32), and said liquid capable of being illuminated with unguided radiation output from the light source which escapes the fibers 32.

As per claims 27 and 49, Eppe discloses in Fig.2 an apparatus and method for illuminating a liquid with radiation output through fibers 32 from a light source 26 capable of being LED (see Col.6, lines 31-32), said fibers may be illuminated with a plurality of colors of light (see abstract and Col.4, lines 54-60) readable as including at least two differently colored LEDs; said liquid capable of being illuminated with unguided radiation output from the light source which escapes the fibers 32.

Art Unit: 2821

As per claim 28, 50 and 51, Epple discloses in Fig.2 an apparatus and method for illuminating a liquid in a pool with radiation output through fibers 32 from a light source 26 capable of being LED (see Col.6, lines 31-32), said fibers may be illuminated with a single color of light (see abstract and Col.4, lines 54-60); said liquid capable of being illuminated with unguided radiation output from the light source which escapes the fibers 32, and said LED light source 26 being supported by the pool via means 18 and 12 which affixed to the sidewall of the pool (see Fig.2 and Col.6, lines 14-16) .

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Epple in view of Campagna et al., Patent No. 4,394,716.

As per claim 3, Epple discloses the claimed invention substantially as explained above. Epple does not specifically disclose the pool including a floor which supports the at least one light source. However, this feature is well-known in the art as evidenced by Campagna which discloses an apparatus having a swimming pool including a floor (see Col.9, lines 22-23); and at least one light source 10 being supported by the floor via mounting means 111-115 (see Fig.6) as the wall and the floor of the pool are integrated. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the pool, floor and light source arrangement as

Art Unit: 2821

taught by Campagna into the Epple type apparatus, because it would prevent the possibility of users accidentally kicking or tripping over the apparatus, thereby improving the efficacy of the apparatus.

As per claims 4-6, Epple in view of Campagna discloses the claimed invention as explained above. Further, Campagna discloses said pool having an inherent range of typical liquid levels of the liquid during use (water in a swimming pool), and said at least one light source 10 being disposed below the range of typical liquid levels and adapted to be submersible in the liquid (see Col.1, lines 52-55, 66-67, and Col.3, lines 60-62 and Col.8, lines 14-15); and said at least one light source 10 including a transparent shell means 11 readable as a waterproof surface as it is placed underwater.

Claims 7-19 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable over Epple in view of Che et al., Patent No. 5,636,303.

As per claim 7, Epple discloses the claimed invention substantially as explained above. Epple does not discloses the at least light source being adapted to generate radiation of different colors without requiring the use of a color filter. Che discloses in Fig.1 an apparatus which comprises at least one light source 12 being adapted to generate radiation of different colors without requiring the use of a color filter (see Col.1, lines 9-12 and Col.3, line 64 - Col.4, line 2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the light source as taught by Che into the Epple type apparatus, because it would ensure a filterless chromatically variable light source which is characterized by reliability, compactness and low cost, thereby improving the efficacy of the apparatus.

As per claims 8-19 and 21, Epple in view of Che discloses the claimed invention substantially as explained above. In addition, Che discloses the at least one LED 12 including at least two differently colored LEDs, blue and yellow (Col.1, lines 9-10 and Col.2, lines 19-23) and inherently red and green as part of different colors of the variable light source; or the at least one LED including at least two independently controllable LED or at least two independently controllable light sources 12 upon independent control by associated individual control circuits 13 and said at least two independently controllable light sources readable as at least two independently addressable light sources which receive command signals from a selection circuit 14; and the at least one light source 12 is adapted to generate a remotely controllable variable radiation output by receiving signals from the selection circuit 14 and the independently control circuits 13, and said at least one controller 13, coupled to the at least one light source 12, to control radiation output or a color and an intensity of the radiation output by the at least one light source 12 (see Figs. 1 and 2 and Col.3, lines 45-55); and the at least one controller 13 outputting at least one control signal to the at least one light source 12 to control the radiation output by the at least one light source; and the at least one control signal capable of including at least one PWM signal when the at least one light source 12 is operated in a pulsed mode (see Col.3, lines 55-59) or at least one variable analog signal when the at least one light source 12 is regulated by employing an adjustable current source 30 (see Col.3, lines 39-42); and the at least one LED 12 including at least a first LED and a second LED, the

Art Unit: 2821

first and second LEDs having different colors since the light source provides light of different colors (see Col.1, lines 9-10); and the at least one controller 13 being adapted to control a first intensity of the first LED and a second intensity of the second LED (see Col.1, lines 61-62); and the at least one light source 12 including at least a first light source and a second light source, wherein the at least one controller 13 includes at least a first controller 13 coupled to the first light source 12 and a second controller 13 coupled to the second light source 12, and wherein each of the first controller and the second controller is adapted to be independently addressable upon receiving command signals from the selection circuit 14; and the first controller and the second controller are coupled together to form a networked lighting system (as shown in Fig.1).

Claims 22, 23, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Campagna et al, in view of Che et al.

As per claims 22 and 29, Campagna discloses an apparatus and method comprising: a pool to contain a liquid (Col.1, lines 46-49, 52-55); at least one housing (11-13) supported by the pool via mounting means 111-115 (see Fig.6 and Col.3, lines 2-5); and a light source 21 disposed in a single housing 30 of the at least one housing (11-13) to illuminate the liquid. Campagna does not disclose at least two independently controllable light sources. Che discloses an apparatus having at least two independently controllable light sources 12 controlled by individual control circuits 13 (see Fig.1). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the at least two independently controllable light sources

Art Unit: 2821

as taught by Che into the Campagna type apparatus because it would allow a variable light source which provides light of different colors, thereby improving the efficacy of the apparatus.

As per claims 23 and 30, Campagna discloses an apparatus and method comprising: a pool to contain a liquid (Col.1, lines 46-49, 52-55); and at least one light source 21, supported by the pool via mounting means 111-115 (see Fig.6 and Col.3, lines 2-5), to illuminate the liquid. Campagna does not disclose the at least one light source being adapted to generate radiation of different colors without requiring the use of a color filter. Che discloses an apparatus which comprises at least one light source 12 being adapted to generate radiation of different colors without requiring the use of a color filter (see Col.1, lines 9-12 and Col.3, line 64 - Col.4, line 2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to employ the light source as taught by Che into the Campagna type apparatus, because it would ensure a filterless chromatically variable light source which is characterized by reliability, compactness and low cost, thereby improving the efficacy of the apparatus.

Allowable Subject Matter

Claim 20 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 24-26, 31-43 and 45-48 are allowed.

Conclusion

Art Unit: 2821

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mitchell et al., Patent No. 5,012,457; Iest, Patent No. 5,169,236.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Haissa Philogene whose telephone number is (703) 305-3485. The examiner can normally be reached on 6:30 A.M.-6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (703) 308-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

hp

Haissa Philogene
Primary Examiner

A.U. 2821
